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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,281	12/16/2003	Gaohong Wei	VRT0112US	6590

60429	7590	05/31/2006

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ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Detailed Action

1. Claims 1 - 31 have been examined.

2. Claims 1 - 31 are pending.

3. Claims 1 - 31 are rejected as detailed below.

Priority

No foreign or domestic priority claimed. Accordingly, the application has been examined with a

effective filing date of 12/16/2003.

Specification

The specification is objected to as failing to provide proper antecedent basis for the

claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the

following is required: Although obvious what is meant by machine-readable medium (i.e.

appears to refer to the data processing system of 0043 of specification), a machine-readable

medium does not appear to be mentioned in the specifications.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent
> therefor, subject to the conditions and requirements of this title.

Claims 23-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter. The claims recite a "plurality of instructions executable by a machine"

however; there is no hardware component to enable the functions of the program code to be realized. See specifications, these codes require a processor to execute.

Claims 13-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims recite an "apparatus" but all of the elements would reasonably be interpreted by one of ordinary skill in the art of the disclosure as software, such that the system is software per se.

Claims 28, 30-31are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims recite a "system" but all of the elements would reasonably be interpreted by one of ordinary skill in the art of the disclosure as software, such that the system is software per se.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

Application publication 2004/0010487 by Prahlad et. al. (hereafter Prahlad).

Claim 1:

A method comprising:

Discovering a plurality of components of a database [0063, discovers volumes on the

given client, 0045 database management systems may use raw logical volumes. That is, plurality

of components (volumes) of a database are discovered.];

Selecting a component of said plurality of components [0019, select a destination

volume for the quick recovery volume of the primary data set from a pool of available volumes];

Selecting a data management resource of a plurality of data management resources

Using an attribute of said component [0034, client computer includes a

plurality of applications and a file system or systems for which a quick recovery volume may be

created. 0036, a sub-client generally refers to a defined set of parameters and policies that

define the scope of the data set, such as the volumes or applications. 0045, The features and

attributes of files may very according to the particular file system in use. The database

management systems may use these special file system features. That is database management

resources (i.e. agents, file system features, and the like) is selected using an attribute of said

component [i.e. feature and attributes for file system features and agents with parameters and

policies defined.]]; and

Generating a point-in-time image of said component using said data management

resource [abstract, snapshot image of primary data generated. 0067, point in time imaging.].

Claim 2:

The method of claim 1, wherein said discovering comprises:

Determining a structure of said database [0042, tracking data changes in volume.

That is, it must determine changes of the structure]; **and**

Identifying each of said plurality of component using said data management

resource [0042, The quick recovery volume may then be incrementally updated in accordance

with the data changes or with reference to the tracked changes in the snap shot images. There

must be identification of volume in order to reference the tracked changes in the snapshot

images.]

Claim 3:

The method of claim 2, wherein said selecting a component of said plurality of components

comprises:

Selecting said component of said plurality of components to include within a point-

in-time image of said database [0037, the destination volume for the quick recovery volume

may be specified to be copied to specific volumes or may be selected automatically from a pool

of available volumes. 0042, quick recovery volume is created by capturing a snapshot image of

the primary data set and creating the quick recovery volume from data stored on the primary

volume. 0067, users may specify a point in time for browsing and restoration to occur. If the

application does not find a snapshot, back copies, such as primary copies and secondary copies,

and quick recovery volumes are presented or accessed for data recovery or restoration.].

Claim 4:

The method of claim 2, wherein said selecting a component of said plurality of components

comprises:

Selecting at least one of a database directory, table space container, and a redo log

directory [0066, volumes in a directory. That is, selection of component (volume) is selected

from a directory.].

Claim 5:

The method of claim 2, wherein said selecting a data management resource of a plurality of

data management resources comprises:

Selecting said data management resource using said attribute of said component a

user-defined policy [0036, A sub-client generally refers to a defined set of parameters and

policies that define the scope of the data set, such as the volumes or applications that are going to

be copied, recovered, or otherwise managed. That is selecting a data management resource (can

be an application) using attribute and user-defined policy (parameters and policies).].

Claim 6:

The method of claim 2, wherein said selecting a data management resource of a plurality of

data management resources comprises:

Selecting said data management resource using at least one of a size attribute, a type

attribute, a structure attribute, and a location attribute [0037, media agent targeting a

volume according to the storage space available on a particular volume in comparison to the

space needed for the quick recovery volume. That is size attribute used for media agent.].

Claim 7:

The method of claim 6, wherein said selecting said data management resource of a plurality of

data management resources further comprises:

Defining a component size range [0037, media agent targeting a volume according to

the storage space available on a particular volume in comparison to the space needed for the

quick recovery volume.]; and

Selecting said data management resource in response to a determination that said

size attribute is within said component size range [0038-0039, media agent may interface with

other agents after determination that said size of attribute is within said component size range.].

Claim 8:

The method of claim 2, wherein said selecting a data management resource of a plurality of

data management resources comprises:

Selecting a point-in-time image creation process [0067, user is able to specify point in

time image. If snapshot is unavailable creation of the point in time image is created for specified

point in time.].

Claim 9:

The method of claim 8, wherein said point-in-time image creation process comprises

at least one of: a file-level point-in-time image creation process, a directory-level point-in-

time image creation process, a file system-level point-in-time image creation process, a

storage device-level point-in-time image creation process, a volume-level point-in-time

image creation process, and a volume group-level point-in-time image creation process

[0066, volume level point in time recovery].

Claim 10:

The method of claim 8, wherein said selecting a point-in-time image creation process

comprises:

Selecting at least one of: a snapshot creation process, a storage checkpoint creation

process, and a file copy command, and a backup utility process [Abstract, snapshot image

generated].

Claim 11:

The method of claim 2, further comprising:

Restoring said database using said point-in-time image of said component [0067,

Snapshot data found to be available as of the point-in-time the user specified is displayed to the

user. Snapshot data is displayed if it exists and qualifies as valid data as of the point-in-time. If

the browser application does not find a snapshot, backup copies, such as primary copies, and

secondary copies, and quick recovery volumes are presented or accessed for data recovery or

restoration.].

Claim 12:

The method of claim 11, wherein,

Said database is initially stored within a first storage region[primary dataset is stored on primary disk, primary data volume], **and**

Said restoring comprises,

Restoring said database to a second storage region [0069, restoring data can be restored and moved to a different disk by using a data mover.].

Claim 13:

An apparatus comprising:

Means for discovering a plurality of components of a database [0063, discovers volumes on the given client, 0045 database management systems may use special file system features or even raw logical volumes. That is, plurality of components (volumes) of a database are discovered.];

Means for associating a data management resource with a component of said plurality of components [0034, client computer includes a plurality of applications and a file system or systems for which a quick recovery volume may be created. 0036, a sub-client generally refers to a defined set of parameters and policies that define the scope of the data set, such as the volumes or applications. 0045, The features and attributes of files may very according to the particular file system in use. The database management systems may use these special file system features. That is database management resources (i.e. agents, file system

features, and the like) is selected using an attribute of said component (i.e. feature and attributes

for file system features and agents with parameters and policies defined), and therefore

associating data management resources with components.]]; **and**

Means for generating a point-in-time image of said component using said data

management resource [abstract, snapshot image of primary data generated. 0067, point in time

imaging.].

Claim 14:

The apparatus of claim 13, wherein said means for discovering comprises:

Means for determining a structure of said database [0042, tracking data changes in

volume. That is, it must determine changes of the structure]; and

Means for identifying each of said plurality of components using said structure

[0042, The quick recovery volume may then be incrementally updated in accordance with the

data changes or with reference to the tracked changes in the snap shot images. There must be

identification of volume in order to reference the tracked changes in the snapshot images.].

Claim 15:

The apparatus of claim 14, wherein said means for associating comprises:

Means for associating a point-in-time image creation process with said component

of said plurality of components [0019, select a destination volume for the quick recovery

volume of the primary data set from a pool of available volumes].

Claim 16:

The apparatus of claim 14, wherein said means for associating comprises:

Means for associating said data management resource with said component of said plurality of components using an attribute of said component [0034, client computer includes a plurality of applications and a file system or systems for which a quick recovery volume may be created. 0036, a sub-client generally refers to a defined set of parameters and policies that define the scope of the data set, such as the volumes or applications. 0045, The features and attributes of files may very according to the particular file system in use. The database management systems may use these special file system features. That is database management resources (i.e. agents, file system features, and the like) is selected using an attribute of said component [i.e. feature and attributes for file system features and agents with parameters and policies defined.]].

Claim 17:

The apparatus of claim 16, wherein said means for associating further comprises:

Means for associating said data management resource with said component of said plurality of components using a user-defined policy [0036, A sub-client generally refers to a defined set of parameters and policies that define the scope of the data set, such as the volumes or applications that are going to be copied, recovered, or otherwise managed. That is selecting a data management resource (can be an application) using attribute and user-defined policy (parameters and policies).].

Claim 18:

The apparatus of claim 16, wherein said means for associating said data management resource with said component of said plurality of components using an attribute of said component comprises:

Means for associating said data management resource with said component of said plurality of components using at least one of a size attribute, a type attribute, a structure attribute, and a location attribute [0037, media agent targeting a volume according to the storage space available on a particular volume in comparison to the space needed for the quick recovery volume. That is size attribute used for media agent.].

Claim 19:

The apparatus of claim 18, wherein said means for associating said data management resource with said component of said plurality of components using an attribute of said component further comprises:

Means for defining a component size range[0037, media agent targeting a volume according to the storage space available on a particular volume in comparison to the space needed for the quick recovery volume.]; and

Means for associating said data management resource with said component in response to a determination that said attribute is within said component size range [0038-0039, media agent may interface with other agents after determination that said size of attribute is within said component size range.].

Claim 20:

The apparatus of claim 14, wherein said means for generating comprises:

Means for generating a point-in-time image of said database [0067, user is able to specify point in time image. If snapshot is unavailable creation of the point in time image is created for specified point in time.].

Claim 21:

The apparatus of claim 14, further comprising:

Means for restoring said database using said point-in-time image of said component [0067, Snapshot data found to be available as of the point-in-time the user specified is displayed to the user. Snapshot data is displayed if it exists and qualifies as valid data as of the point-in-time. If the browser application does not find a snapshot, backup copies, such as primary copies, and secondary copies, and quick recovery volumes are presented or accessed for data recovery or restoration.].

Claim 22:

The apparatus of claim 21, wherein,

Said database is initially stored within a first storage region [primary dataset is stored on primary disk, primary data volume], and

Said means for restoring comprises,

Means for restoring said database to a second storage region [0069, restoring data can be restored and moved to a different disk by using a data mover.].

Claim 23:

A machine-readable medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to perform a method comprising:

Discovering a plurality of components of a database [0063, discovers volumes on the given client, 0045 database management systems may use special file system features or even raw logical volumes. That is, plurality of components (volumes) of a database are discovered.];

Selecting a component of said plurality of components [0019, select a destination volume for the quick recovery volume of the primary data set from a pool of available volumes];

Selecting a data management resource of a plurality of data management resources using an attribute of said component[0034, client computer includes a plurality of applications and a file system or systems for which a quick recovery volume may be created. 0036, a sub-client generally refers to a defined set of parameters and policies that define the scope of the data set, such as the volumes or applications. 0045, The features and attributes of files may very according to the particular file system in use. The database management systems may use these special file system features. That is database management resources (i.e. agents, file system features, and the like) is selected using an attribute of said component [i.e. feature and attributes for file system features and agents with parameters and policies defined.]]; and

Generating a point-in-time image of said component using said data management resource [abstract, snapshot image of primary data generated. 0067, point in time imaging.].

Claim 24:

The machine-readable medium of claim 23, wherein said discovering comprises:

Determining a structure of said database[0042, tracking data changes in volume. That is, it must determine changes of the structure]; and

Identifying each of said plurality of components using said structure [0042, The quick recovery volume may then be incrementally updated in accordance with the data changes or with reference to the tracked changes in the snap shot images. There must be identification of volume in order to reference the tracked changes in the snapshot images.].

Claim 25:

The machine-readable medium of claim 24 wherein said selecting a component of said plurality of components comprises:

Selecting said component of said plurality of components to include within a point-in-time image of said database [0037, the destination volume for the quick recovery volume may be specified to be copied to specific volumes or may be selected automatically from a pool of available volumes. 0042, quick recovery volume is created by capturing a snapshot image of the primary data set and creating the quick recovery volume from data stored on the primary volume. 0067, users may specify a point in time for browsing and restoration to occur. If the application does not find a snapshot, back copies, such as primary copies and secondary copies, and quick recovery volumes are presented or accessed for data recovery or restoration.].

Claim 26:

The machine-readable medium of claim 24, wherein said selecting a data management

resource of a plurality of data management resources comprises:

Selecting said data management resource using said attribute of said component

and a user-defined policy [0036, A sub-client generally refers to a defined set of parameters and

policies that define the scope of the data set, such as the volumes or applications that are going to

be copied, recovered, or otherwise managed. That is selecting a data management resource (can

be an application) using attribute and user-defined policy (parameters and policies).].

Claim 27:

The machine-readable medium of claim 24, wherein said selecting a data management

resource of a plurality of data management resource of a plurality of data management

resources comprises:

Selecting a point in time image creation process [0067, user is able to specify point in

time image. If snapshot is unavailable creation of the point in time image is created for specified

point in time.].

Claim 28:

A system comprising:

A first storage element to store a database [0045-0046, database management system

comprising a storage unit. 0038, primary volumes and the quick recovery volumes may be

stored via a variety of storage devices.]; and

A point-in-time image utility configured to,

Access said first storage device [0039, snapshot image of the primary data set is accessed to create a quick recovery volume of the primary data set.];

Discover a plurality of components of said database [0063, discovers volumes on the given client, 0045 database management systems may use raw logical volumes. That is, plurality of components (volumes) of a database are discovered.];

Select a component of said plurality of components [0019, select a destination volume for the quick recovery volume of the primary data set from a pool of available volumes];

Select a data management resource of a plurality of data management resources using an attribute of said component [0034, client computer includes a plurality of applications and a file system or systems for which a quick recovery volume may be created. 0036, a sub-client generally refers to a defined set of parameters and policies that define the scope of the data set, such as the volumes or applications. 0045, The features and attributes of files may very according to the particular file system in use. The database management systems may use these special file system features. That is database management resources (i.e. agents, file system features, and the like) is selected using an attribute of said component [i.e. feature and attributes for file system features and agents with parameters and policies defined.]]; **and**

Generate a point-in-time image of said component using said data management resource [abstract, snapshot image of primary data generated. 0067, point in time imaging.].

Claim 29:

The system of claim 28, wherein said point-in-time image utility comprises:

A memory to store said point-in-time image utility [Prahlad discloses a point-in-time

snapshot application run on a computer, Abstract and 0067]; **and**

A processor coupled to said memory to execute said point-in-time image utility

[Prahlad discloses a point-in-time snapshot application run on a computer, (Abstract and 0067)].

Claim 30:

The system of claim 28, further comprising a first node, wherein said first node comprises

said first storage element and said point-in-time image utility[0067, primary dataset is stored

on primary disk, primary data volume].

Claim 31:

The system of claim 30, further comprising a second node communicatively coupled to said

first node, wherein said second node comprises a second storage element to store said

point-in-time image of said component [0069, restoring data can be restored and moved to a

second storage region by using a data mover.].

Conclusion

The prior art made of record listed on PTO-892 and not relied, if any, upon is considered

pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael D. Pham whose telephone number is (571)272-3924.

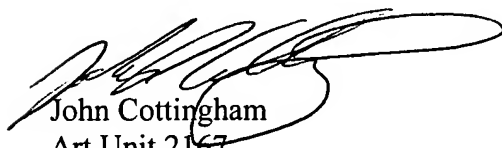The examiner can normally be reached on Monday - Friday 9am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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